

PLUS 4/26/04

**Butler, Douglas**

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**From:** PLUS  
**Sent:** Monday, April 19, 2004 11:27 AM  
**To:** Butler, Douglas  
**Subject:** PLUS Results for 09974739

Here are the PLUS search results for 09974739.

This search was prepared by the staff of the Scientific and Technical Information Center, SIRA. If you have questions or comments about this search, please reply via email to PLUS@uspto.gov.



09974739\_OUAL.txt



09974739\_LIST.txt



09974739\_WEST.txt



09974739\_EAST.txt



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09974739\_CLS.txt



09974739\_CLSTITLES.t



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09974739\_LIST  
PLUS Search Results for S/N 09974739, Searched April 19, 2004

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

6084493	6470790	5378122
4628499	4579141	5379330
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09974739\_CLS

Most Frequently Occurring Classifications of Patents Returned  
From A Search of 09974739 on April 19, 2004

Original Classifications

3 91/376R  
3 188/266.6  
3 254/270  
3 376/260  
2 74/606R  
2 123/90.41  
2 137/218  
2 137/625.43  
2 188/151R  
2 222/401  
2 303/9.75

Cross-Reference Classifications

4 60/547.1  
4 137/596.17  
4 188/349  
4 251/129.14  
3 91/376R  
3 91/459  
3 239/363  
3 254/360  
3 303/61  
3 376/258  
2 60/545  
2 60/551  
2 60/593  
2 60/594  
2 74/579R  
2 91/44  
2 92/240  
2 92/33  
2 166/75.15  
2 188/290  
2 210/237  
2 222/209  
2 222/325  
2 239/360  
2 239/373  
2 251/129.08  
2 251/287  
2 303/10  
2 303/2  
2 303/9.62  
2 376/313  
2 417/555.2  
2 475/82

Combined Classifications

6 91/376R  
5 137/596.17  
4 60/547.1  
4 188/349  
4 251/129.14  
4 376/258

3 60/594  
3 74/579R  
3 91/459  
3 123/90.41  
3 137/218  
3 188/266.6  
3 222/401  
3 239/363  
3 254/270  
3 254/360  
3 303/61  
3 303/9.62  
3 376/260  
3 417/555.2  
2 60/487  
2 60/545  
2 60/548  
2 60/551  
2 60/562  
2 60/593  
2 74/606R  
2 74/625  
2 91/361  
2 91/375A  
2 91/44  
2 92/187  
2 92/240  
2 92/33  
2 123/568.24  
2 137/625.43  
2 137/627.5  
2 166/75.15  
2 180/429  
2 188/151R  
2 188/290  
2 210/237  
2 222/209  
2 222/325  
2 222/385  
2 239/360  
2 239/373  
2 251/129.08  
2 251/287  
2 251/30.01  
2 251/65  
2 251/96  
2 303/10  
2 303/119.2  
2 303/2  
2 303/9.75  
2 376/313  
2 475/82

09974739\_CLSTITLES  
Titles of Most Frequently Occurring Classifications of Patents Returned  
From A Search of 09974739 on April 19, 2004

6 91/376R (3 OR, 3 XR)  
Class 091 : MOTORS: EXPANSIBLE CHAMBER TYPE  
91/358R WORKING MEMBER POSITION FEEDBACK TO MOTIVE  
FLUID CONTROL  
91/368 .Follower type  
91/374 ..Plural movable valve parts  
91/376R ...One movable part unitary with working member

5 137/596.17 (1 OR, 4 XR)  
Class 137 : FLUID HANDLING  
137/561R SYSTEMS  
137/596 .Supply and exhaust  
137/596.17 ..Motor

4 60/547.1 (0 OR, 4 XR)  
Class 060 : POWER PLANTS  
60/325 PRESSURE FLUID SOURCE AND MOTOR  
60/533 .Pulsator  
60/547.1 ..With control of or by a separate power fluid,  
etc.

4 188/349 (0 OR, 4 XR)  
Class 188 : BRAKES  
188/381 FRICTIONAL VIBRATION DAMPER  
188/151R .Fluid pressure  
188/152 ..Road vehicle  
188/349 ...With front rear brake apportioner

4 251/129.14 (0 OR, 4 XR)  
Class 251 : VALVES AND VALVE ACTUATION  
251/129.01 ELECTRICALLY ACTUATED VALVE  
251/129.14 .Freely rotatable ball valve

4 376/258 (1 OR, 3 XR)  
Class 376 : INDUCED NUCLEAR REACTIONS: PROCESSES,  
SYSTEMS, AND ELEMENTS  
376/245 TESTING, SENSING, MEASURING, OR DETECTING A  
FISSION REACTOR CONDITION  
376/258 .Position detection

3 60/594 (1 OR, 2 XR)  
Class 060 : POWER PLANTS  
60/325 PRESSURE FLUID SOURCE AND MOTOR  
60/533 .Pulsator  
60/594 ..Having cam, or lever system driving master

3 74/579R (1 OR, 2 XR)  
Class 074 : MACHINE ELEMENT OR MECHANISM  
74/469 CONTROL LEVER AND LINKAGE SYSTEMS  
74/579R .Pitmans and connecting rods

3 91/459 (0 OR, 3 XR)  
Class 091 : MOTORS: EXPANSIBLE CHAMBER TYPE  
91/418 WITH MOTIVE FLUID VALVE

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91/459 .Electrically operated (275) (361)

3 123/90.41 (2 OR, 1 XR)  
Class 123 : INTERNAL-COMBUSTION ENGINES  
123/90.1 POPPET VALVE OPERATING MECHANISM  
123/90.39 .Rocker  
123/90.41 ..Individually fulcrumed

3 137/218 (2 OR, 1 XR)  
Class 137 : FLUID HANDLING  
137/215 BACK FLOW PREVENTION BY VACUUM BREAKING (E.G.,  
ANTI-SIPHON DEVICES)  
137/216 .Air vent in liquid flow line  
137/217 ..Valved  
137/218 ...With co-acting valve in liquid flow path

3 188/266.6 (3 OR, 0 XR)  
Class 188 : BRAKES  
188/266 INTERNAL-RESISTANCE MOTION RETARDER  
188/266.1 .Motion damped from condition (e.g., bump,  
speed change) detected outside of retarder  
188/266.2 ..Condition actuates valve or regulator  
188/266.5 ...Of the pulsating or reciprocating type  
188/266.6 ....Side mounted

3 222/401 (2 OR, 1 XR)  
Class 222 : DISPENSING  
222/251 WITH DISCHARGE ASSISTANT (E.G., IMPELLER, PUMP,  
CONVEYER, MOVABLE TRAP CHAMBER, ETC.)  
222/394 .Fluid pressure  
222/401 ..Container-mounted fluid pressure generating  
pump or pulsator

3 239/363 (0 OR, 3 XR)  
Class 239 : FLUID SPRINKLING, SPRAYING, AND DIFFUSING  
239/302 INCLUDING SUPPLY HOLDER FOR MATERIAL  
239/337 .Fluid pressure discharge means  
239/340 ..Pressure reducer at holder outlet  
239/355 ...Holder carried or mounted gas pump  
239/363 ....Flexible wall gas pump

3 254/270 (3 OR, 0 XR)  
Class 254 : IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING  
OR PULLING FORCE  
254/264 APPARATUS FOR HAULING OR HOISTING LOAD,  
INCLUDING DRIVEN DEVICE WHICH CONTACTS AND PULLS ON CAB

LE

254/266 .Device includes rotatably driven, cable  
contacting drum  
254/270 ..Having cable contacted, supported, or  
attached mechanism for generating control impulse to  
retarding means or drive

3 254/360 (0 OR, 3 XR)  
Class 254 : IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING  
OR PULLING FORCE  
254/264 APPARATUS FOR HAULING OR HOISTING LOAD,  
INCLUDING DRIVEN DEVICE WHICH CONTACTS AND PULLS ON CAB

LE

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254/266 .Device includes rotatably driven, cable  
          contacting drum

254/360 ..Drive includes expandible, noncombustible,  
          fluid motor (e.g., air, steam)

3 303/61 (0 OR, 3 XR)  
Class 303 : FLUID-PRESSURE AND ANALOGOUS BRAKE SYSTEMS  
303/50 MOTORMAN'S VALVES  
303/61 .Intermittent

3 303/9.62 (1 OR, 2 XR)  
Class 303 : FLUID-PRESSURE AND ANALOGOUS BRAKE SYSTEMS  
303/5 MULTIPLE FLUID-RECEIVING DEVICES  
303/6.01 .Multiple motors  
303/9.62 ..Apportioning control

3 376/260 (3 OR, 0 XR)  
Class 376 : INDUCED NUCLEAR REACTIONS: PROCESSES,  
          SYSTEMS, AND ELEMENTS  
376/260 HANDLING OF FISSION REACTOR COMPONENT STRUCTURE  
          WITHIN REACTOR SYSTEM

3 417/555.2 (1 OR, 2 XR)  
Class 417 : PUMPS  
417/437 EXPANSIBLE CHAMBER TYPE  
417/555.1 .Fluid serially moved to opposite side of  
          pumping member  
417/555.2 ..Well swabs

2 60/487 (1 OR, 1 XR)  
Class 060 : POWER PLANTS  
60/325 PRESSURE FLUID SOURCE AND MOTOR  
60/487 .Input pump and rotary output motor system  
          having displacement varying type of direction or speed  
          selector

2 60/545 (0 OR, 2 XR)  
Class 060 : POWER PLANTS  
60/325 PRESSURE FLUID SOURCE AND MOTOR  
60/533 .Pulsator  
60/545 ..Having electricity or magnetically operated  
          structure

2 60/548 (1 OR, 1 XR)  
Class 060 : POWER PLANTS  
60/325 PRESSURE FLUID SOURCE AND MOTOR  
60/533 .Pulsator  
60/547.1 ..With control of or by a separate power fluid,  
          etc.  
60/548 ...Flow in recirculating circuit controlled

2 60/551 (0 OR, 2 XR)  
Class 060 : POWER PLANTS  
60/325 PRESSURE FLUID SOURCE AND MOTOR  
60/533 .Pulsator  
60/547.1 ..With control of or by a separate power fluid,  
          etc.

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60/551      ...Manual master and controller of motor driven  
master actuated by separate linkages to a common operatin  
g  
lever

2    60/562      (1 OR, 1 XR)  
Class    060 : POWER PLANTS  
60/325      PRESSURE FLUID SOURCE AND MOTOR  
60/533      .Pulsator  
60/562      ..Master piston of one pulsator circuit drives  
              master piston of a parallel circuit through a resilient,  
              fluid or lost motion connection

2    60/593      (0 OR, 2 XR)  
Class    060 : POWER PLANTS  
60/325      PRESSURE FLUID SOURCE AND MOTOR  
60/533      .Pulsator  
60/593      ..Having fluid motor driving piston of master  
              unit

2    74/606R      (2 OR, 0 XR)  
Class    074 : MACHINE ELEMENT OR MECHANISM  
74/469      CONTROL LEVER AND LINKAGE SYSTEMS  
74/606R      .Gear casings

2    74/625      (1 OR, 1 XR)  
Class    074 : MACHINE ELEMENT OR MECHANISM  
74/625      ALTERNATE MANUAL OR POWER OPERATORS

2    91/361      (1 OR, 1 XR)  
Class    091 : MOTORS: EXPANSIBLE CHAMBER TYPE  
91/358R      WORKING MEMBER POSITION FEEDBACK TO MOTIVE  
              FLUID CONTROL  
91/361      .Electrical input and feedback signal means  
              (459)

2    91/375A      (1 OR, 1 XR)  
Class    091 : MOTORS: EXPANSIBLE CHAMBER TYPE  
91/358R      WORKING MEMBER POSITION FEEDBACK TO MOTIVE  
              FLUID CONTROL  
91/368      .Follower type  
91/374      ..Plural movable valve parts  
91/375R      ...Valve part moves about an axis  
91/375A      ....Torsion bar

2    91/44      (0 OR, 2 XR)  
Class    091 : MOTORS: EXPANSIBLE CHAMBER TYPE  
91/41      WITH CORRELATED CONTROL OF MOTIVE FLUID AND  
              LOCKING MEANS  
91/44      .Sequential operation of locking means and  
              motive fluid control

2    92/187      (1 OR, 1 XR)  
Class    092 : EXPANSIBLE CHAMBER DEVICES  
92/172      PISTON  
92/187      .With separable means for pivotally mounting  
              connecting rod to piston

2    92/240      (0 OR, 2 XR)

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Class 092 : EXPANSIBLE CHAMBER DEVICES  
92/172 PISTON  
92/240 .Side wall portion includes peripheral axially  
extending flexible lip

2 92/33 (0 OR, 2 XR)  
Class 092 : EXPANSIBLE CHAMBER DEVICES  
92/31 RECTILINEARLY MOVING WORKING MEMBER AND COAXIAL  
OR PARALLEL ELEMENT SLIDABLY INTERENGAGED FOR RELATIVE  
ROTARY MOVEMENT  
92/33 .Element extends through working member portion

2 123/568.24 (1 OR, 1 XR)  
Class 123 : INTERNAL-COMBUSTION ENGINES  
123/434 CHARGE FORMING DEVICE (E.G., POLLUTION CONTROL)  
  
123/568.11 .Exhaust gas used with the combustible mixture  
(e.g., emission control Exhaust Gas Recirculation (EGR  
)  
valve)  
123/568.21 ..Having electrically actuated control means  
123/568.23 ...Having rotary actuator control of EGR valve  
  
123/568.24 ....Electrical rotary actuator rotates the EGR  
valve

2 137/625.43 (2 OR, 0 XR)  
Class 137 : FLUID HANDLING  
137/561R SYSTEMS  
137/625 .Multi-way valve unit  
137/625.43 ..Four port reversing valves

2 137/627.5 (1 OR, 1 XR)  
Class 137 : FLUID HANDLING  
137/561R SYSTEMS  
137/627.5 .Sequentially closing and opening alternately  
seating flow controllers

2 166/75.15 (0 OR, 2 XR)  
Class 166 : WELLS  
166/75.11 ABOVE GROUND APPARATUS  
166/75.15 .With means for injecting solid or particulate  
material into the well

2 180/429 (1 OR, 1 XR)  
Class 180 : MOTOR VEHICLES  
180/400 STEERING GEAR  
180/417 .With fluid power assist  
180/429 ..Having rotary working member

2 188/151R (2 OR, 0 XR)  
Class 188 : BRAKES  
188/381 FRICTIONAL VIBRATION DAMPER  
188/151R .Fluid pressure

2 188/290 (0 OR, 2 XR)  
Class 188 : BRAKES  
188/266 INTERNAL-RESISTANCE MOTION RETARDER

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188/290 .Using a rotary-type fluid damper

2 210/237 (0 OR, 2 XR)  
Class 210 : LIQUID PURIFICATION OR SEPARATION  
210/232 WITH REPAIR OR ASSEMBLING MEANS  
210/237 .Hoist or handle means

2 222/209 (0 OR, 2 XR)  
Class 222 : DISPENSING  
222/206 RESILIENT WALL  
222/209 .Fluid pressure generating pump or pulsator  
and/or removable flexible wall closures

2 222/325 (0 OR, 2 XR)  
Class 222 : DISPENSING  
222/251 WITH DISCHARGE ASSISTANT (E.G., IMPELLER, PUMP,  
CONVEYER, MOVABLE TRAP CHAMBER, ETC.)  
222/325 .Insertable cartridge or removable container

2 222/385 (1 OR, 1 XR)  
Class 222 : DISPENSING  
222/251 WITH DISCHARGE ASSISTANT (E.G., IMPELLER, PUMP,  
CONVEYER, MOVABLE TRAP CHAMBER, ETC.)  
222/372 .With material supply container and discharge  
assistant with casing (e.g., supply container and pump)  
222/383.1 ..Container-mounted pump  
222/385 ...Pump or pulsator casing within supply  
container

2 239/360 (0 OR, 2 XR)  
Class 239 : FLUID SPRINKLING, SPRAYING, AND DIFFUSING  
239/302 INCLUDING SUPPLY HOLDER FOR MATERIAL  
239/337 .Fluid pressure discharge means  
239/340 ..Pressure reducer at holder outlet  
239/355 ...Holder carried or mounted gas pump  
239/360 ....Pump casing within supply holder

2 239/373 (0 OR, 2 XR)  
Class 239 : FLUID SPRINKLING, SPRAYING, AND DIFFUSING  
239/302 INCLUDING SUPPLY HOLDER FOR MATERIAL  
239/337 .Fluid pressure discharge means  
239/373 ..Means to pressurize contents of holder

2 251/129.08 (0 OR, 2 XR)  
Class 251 : VALVES AND VALVE ACTUATION  
251/129.01 ELECTRICALLY ACTUATED VALVE  
251/129.08 .Having means to produce proportional flow

2 251/287 (0 OR, 2 XR)  
Class 251 : VALVES AND VALVE ACTUATION  
251/284 LIMIT STOP  
251/286 .Rotary valve  
251/287 ..Stop element on head

2 251/30.01 (1 OR, 1 XR)  
Class 251 : VALVES AND VALVE ACTUATION  
251/12 FLUID ACTUATED OR RETARDED  
251/25 .Pilot or servo type motor

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251/30.01 ..Electrically actuated pilot valve

2 251/65 (1 OR, 1 XR)  
Class 251 : VALVES AND VALVE ACTUATION  
251/65 PERMANENT OR CONSTANTLY ENERGIZED MAGNET  
ACTUATOR

2 251/96 (1 OR, 1 XR)  
Class 251 : VALVES AND VALVE ACTUATION  
251/89 WITH MEANS FOR BLOCKING OR DISABLING ACTUATOR

251/95 .Released by non-valving actuator motion  
251/96 ..Linear reciprocation of rotary handle

2 303/10 (0 OR, 2 XR)  
Class 303 : FLUID-PRESSURE AND ANALOGOUS BRAKE SYSTEMS  
303/10 WITH PUMP

2 303/119.2 (1 OR, 1 XR)  
Class 303 : FLUID-PRESSURE AND ANALOGOUS BRAKE SYSTEMS  
303/121 SPEED-CONTROLLED  
303/113.1 .Having a valve system responsive to a wheel  
lock signal  
303/119.1 ..System controlled by solenoid valve  
303/119.2 ...System solenoid valve detail

2 303/2 (0 OR, 2 XR)  
Class 303 : FLUID-PRESSURE AND ANALOGOUS BRAKE SYSTEMS  
303/2 MULTIPLE SYSTEMS

2 303/9.75 (2 OR, 0 XR)  
Class 303 : FLUID-PRESSURE AND ANALOGOUS BRAKE SYSTEMS  
303/5 MULTIPLE FLUID-RECEIVING DEVICES  
303/6.01 .Multiple motors  
303/9.62 ..Apportioning control  
303/9.75 ...Detail

2 376/313 (0 OR, 2 XR)  
Class 376 : INDUCED NUCLEAR REACTIONS: PROCESSES,  
SYSTEMS, AND ELEMENTS  
376/308 FISSION REACTOR MATERIAL (INCLUDING REACTION  
PRODUCTS) TREATMENT  
376/310 .Impurity removal  
376/313 ..By filters, ion exchangers, or absorbers

2 475/82 (0 OR, 2 XR)  
Class 475 : PLANETARY GEAR TRANSMISSION SYSTEMS OR  
COMPONENTS  
475/31 FLUID DRIVE OR CONTROL OF PLANETARY GEARING  
475/72 .Fluid pump and motor in one of plural paths to  
or from planetary gearing  
475/80 ..Plural speed ranges  
475/81 ...With constant speed ratio between input and  
one fluid unit  
475/82 ....Having single planet carrier

L Number	Hits	Search Text	DB	Time stamp
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